

Work Order ID 63727-2

November 11, 2010 10:32:20 AM

SPHIT-2



Item ID: D3943-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Ground Handling Crank Assembly

Start Date: 11/11/10 Start Qty: 10.00

Required Date: 11/17/10 Req'd Qty: 10.00



Cust Item ID:

Customer:

Reference:

Run Start



Approvals: Process Plan: CZ

Date: 10/11/11 Tooling:

Date:

Stop



QC:

Date: SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

Draw Nbr

Revision Nbr

D3943

C

0.00

100



Purchasing

Purchasing

Memo

Issue P/O:

12903

Purchase Part Number 8143919

Supplier Princess Auto

Certificate of conformity is required

Description 4000 lbs lever chain hoist

0.00

CZ 10/11/11 (10) 5

110



Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

0.00

Memo

Ensure material certification is attached

0.00

Rec'd 11/18/10

Dart Aerospace Ltd

W/O: <u>63727-2</u>		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/04/20	# 200	Perm change ADD Note Must have a internal calibration cert. filled out and ADD to #70	<i>[Signature]</i>	11.04.20	-	<i>[Signature]</i>	<i>[Signature]</i> 11/04/20

Part No: D3943-041 PAR #: N/A Fault Category: Large Tab NCR: Yes No DQA: A Date: 11.04.21  
 Resolution: Re-work Disposition: Re-work QA: N/C Closed Date: 11/04/25

NCR: <u>63727-2</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/04/18	# 190	when Doing Final calibration Found that D3943-5 plate that is welded on the H2 D3943-031 handle Doesn't line up with extension	<i>[Signature]</i> G2R2	- grind off and reweld in to place D3943-5 plate to match with D3943-3 handle extension	<i>[Signature]</i> 11-4-18	<i>[Signature]</i> 11/04/18	<i>[Signature]</i> 05/18	<i>[Signature]</i> 11/04/18
		hole for H2 3408A99 Pungers in D3943-3 handle extension All parts are assembled and installed per Dwg.	<i>[Signature]</i> G2R2	→ Re Plc as per Q57005 Start 10:00 Fin 10:30 term 400 → Re Assemble as per Dwg.	<i>[Signature]</i> 11-4-18 11.04.19	<i>[Signature]</i> 11/04/19	<i>[Signature]</i> 05/19	<i>[Signature]</i> 11/04/18
		Re tol. Build up. on Parts.						<i>[Signature]</i> 11/04/18

NOTE: Date & initial all entries

# Work Order ID 63727

November 11, 2010 10:32:20 AM



Page 5

Item ID:	D3943-041	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Ground Handling Crank Assembly					
Start Date:	11/11/10	Start Qty:	10.00		Cust Item ID:	
Required Date:	11/17/10	Req'd Qty:	10.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: _____	0.00							
	Packaging	Memo							
	Packaging								
220	QC21- Final Inspection - Work Order Release	0.00							
	QC	Memo							
	Quality Control								

Run	Start	
	Stop	

11/4/2010

MF

11-04-20



# Picklist Print

November 11, 2010 10:32:19 AM

Page 1

Work Order ID: 63727

Parent Item: D3943-041

Parent Item Name: Ground Handling Crank Assembly



Start Date: 11/11/10

Required Date: 11/17/10

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A New Issue 09-06-02 EC Verified By: JLM IPP RevB:  
add DEO DD 09.11.18 verified by:JLM IPP Rev:C as per dwg  
REV.C DD 10.02.22 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
8143919  Lever Chain Hoist		Purchased	No			110	Each	0.0000	1	10			
D3943-051  Handle Assembly		Manufactured	No			180	Each	0.0000	1	10			
D3943-053  Chain Assembly		Manufactured	No			180	Each	0.0000	1	10			
D3943-3  Handle Extension		Manufactured	No			180	Each	2.0000	1	10			
<div> <div>63739 x3</div> <div> <div>Location</div> <div>ST098</div> <div>52978</div> </div> <div> <div>Loc Qty</div> <div>2</div> <div>2</div> </div> <div> <div>Loc Code</div> </div> </div>													
CBL-1240  Cable		Purchased	No			180	Each	329.0860	1	10			
<div> <div>63739 x3</div> <div> <div>Location</div> <div>ST275</div> <div>113565</div> </div> <div> <div>Loc Qty</div> <div>329.0860107</div> <div>329.086011</div> </div> <div> <div>Loc Code</div> </div> </div>													

CL 11/03/12

EL 11-4-18

EL 11-4-18

EL 11-4-13

EL 11-4-13

41

# Picklist Print

November 11, 2010 10:32:19 AM

Page 2

Work Order ID: 63727

Parent Item: D3943-041

Parent Item Name: Ground Handling Crank Assembly

Start Date: 11/11/10

Required Date: 11/17/10

Start Qty: 10.00

Required Qty: 10.00

CBL-460

Purchased

No

180

Each

94.0000

2

20



Loop Sleeve



EL 11-4-13

Location

Loc Qty

Loc Code

ST284

66

114622

5

115579

61

ST285

28

113002

28

m 116953 x 14

D3585-1

Manufactured

No

180

Each

103.0000

1

10



Set Screw



EL 11-4-13

Location

Loc Qty

Loc Code

GA ST072

103

31571

3

55705

100

D3949-041

Manufactured

No

180

Each

32.0000

1

10



Remove before Flight Flag Assembly



EL 11-4-13

Location

Loc Qty

Loc Code

ST487

32

48280

32

D3954-7

Manufactured

No

180

Each

1.0000

1

10



Ratchet Lug



EL 10-11-31

Location

Loc Qty

Loc Code

ST102

1

55710

1

63738

4

4

November 11, 2010 10:32:19 AM

Shop Packet Print

Page 2

# Picklist Print

November 11, 2010 10:32:19 AM

Page 3

Work Order ID: 63727

Parent Item: D3943-041

Parent Item Name: Ground Handling Crank Assembly

Start Date: 11/11/10

Required Date: 11/17/10

Start Qty: 10.00

Required Qty: 10.00

AN5-11A

Purchased

No

180

Each

46.0000

1

10



Bolt



EL 11-4-13

Location

Loc Qty

Loc Code

ST

29

115374

29

ST338

17

115422

17

AN960-516

NAS1149F0563P

Purchased

No

180

Each

86.0000

1

10



WASHER



EL 11-4-13

Location

Loc Qty

Loc Code

ST346

86

110098

86

MS21042L5

Purchased

No

180

Each

1,389.000

1

10



Nut



EL 11-4-13

Location

Loc Qty

Loc Code

ST139

26

114813

26

ST300

1363

115156

163

115594

500

116104

200

116105

500

November 11, 2010 10:32:19 AM

Shop Packet Print

Page 3

# Picklist Print

November 11, 2010 10:32:19 AM

Page 4

Work Order ID: 63727

Parent Item: D3943-041

Parent Item Name: Ground Handling Crank Assembly

Start Date: 11/11/10

Required Date: 11/17/10

Start Qty: 10.00

Required Qty: 10.00

S1475

Purchased

No

180

Each

25.0000

1

10



inventory



EL 11-4-18

Location

Loc Qty

Loc Code

ST396

25

113079

11

113847

14

3408A59

Purchased

No

180

Each

23.0000

1

10



BALL PLUNGER



EL 11-4-18

Location

Loc Qty

Loc Code

ST401

23

111948

2

113854

21

HX-15

Purchased

No

180

Each

50.0000

1

10



1/4-20 UNCx3/4 S.H.C.S.



EL 11-4-18

Location

Loc Qty

Loc Code

ST390

50

114383

50

HX-16

Purchased

No

180

Each

100.0000

3

30



EL 11-4-18

Location

Loc Qty

Loc Code

ST390

100

113771

100

30365T35

4/20/13

M117412 x 3

M116125 x 2

EL 11-4-18

November 11, 2010 10:32:19 AM

Shop Packet Print

Page 4



ITEM No.	QTY -041	QTY -051	QTY -053	PART NUMBER	DESCRIPTION	PREFERRED SUPPLIER
1	X			D3943-041	GROUND HANDLING CRANK ASSEMBLY	
5	1	X		D3943-051	HANDLE ASSEMBLY	
6	1		X	D3943-053	CHAIN ASSEMBLY	
11		1		D3943-1	HANDLE	M/F HANDLE FROM DIS-ASSEMBLED ITEM 39
12	1			D3943-3	HANDLE EXTENSION	
13		1		D3943-5	PLATE	
14		2		D3943-7	STUD	
15			1	D3943-9	CHAIN	USE CHAIN SUPPLIED WITH ITEM 39
21	1			D2690-4	LANYARD	
22	1			D3565-1	SET SCREW	
23	1			D3949-041	REMOVE BEFORE FLIGHT FLAG	
24			1	D3954-5	CHAIN LUG	
25	1			D3954-7	RATCHET LUG	
26			1	D3954-9	GWT CHAIN PIN	
31	1			AN5-11A	BOLT	
32	1			AN960-516	WASHER	
33	1			MS21042L5	NUT	
39	1			8143919	LEVER CHAIN HOIST (POWER FIST)	PRINCESS AUTO / 4000 lbs CAPACITY
41	1			S-1475	SPRING	REID SUPPLY
42	1			3408A50	BALL PLUNGER	McMASTER CARR
43	1			HX-15	SOCKET HEAD CAP SCREW 1/2-20 UNC X 0.75 LG	HASKINS
44	1			HX-16	SOCKET HEAD CAP SCREW 1/2-20 UNC X 1.0 LG	HASKINS

C2101111  
W101.63727

RELEASED  
2010-11-18

C	RMV FINISH -041 (ZN A8-2), ADD NEW FINISH -051/-053 -1/-3 (A8-3/-4/-5), ADD CALIBRATION (A8-2), (1) HX-16 WAS HX-15 (B3-1, C3-1), PAR 10-001	CP	10.01.26
B	SHT 1 PL, ITEM 31 WAS AN4-10A, ITEM 32 WAS AN960-416, ITEM 33 WAS MS21042-4, ITEM 43 WAS 0.75 LG. SHEETS 2 - 5 NOTES: FINISH FOR ALL COMPONENTS NOW YELLOW SPRAY PAINT.	AJS	09.10.15
A	NEW ISSUE	AJS	09.05.13
REV.	DESCRIPTION	BY	DATE
DESIGN	DSTOW / AJS		
DRAWN	99		
CHECKED	11		
MFG. APPR.	11		
APPROVED	11		
DE APPR.	N/A		
DATE	10.01.26		

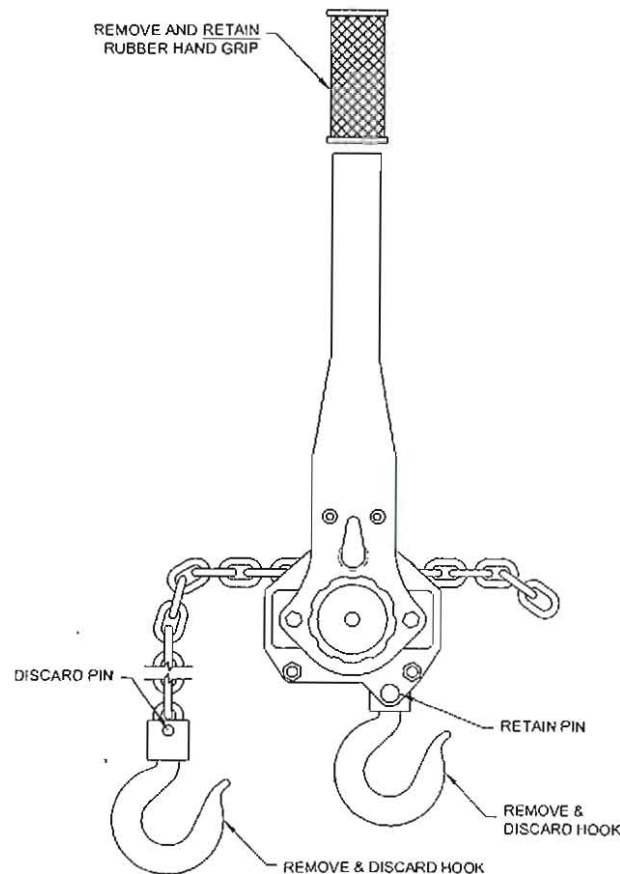
  

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3943	REV. C SHEET 1 OF 5
TITLE GROSS WEIGHT TOW CRANK ASSY	SCALE NTS
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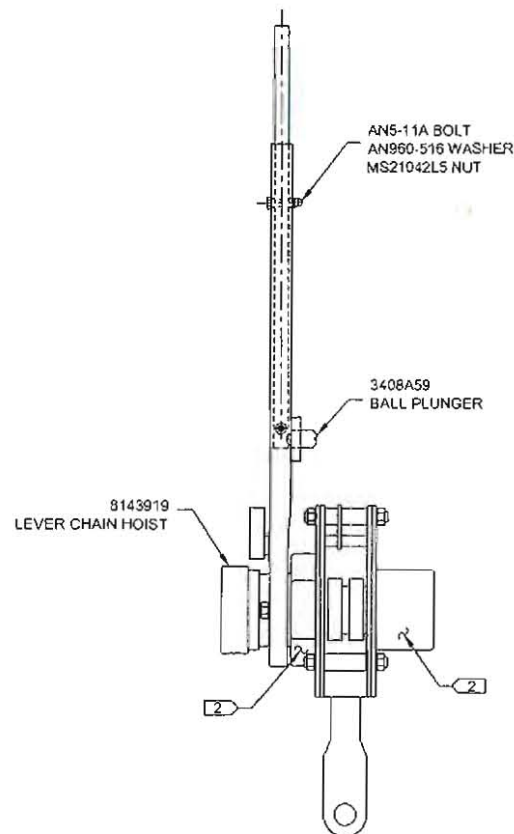


8 7 6 5 4 3 2 1

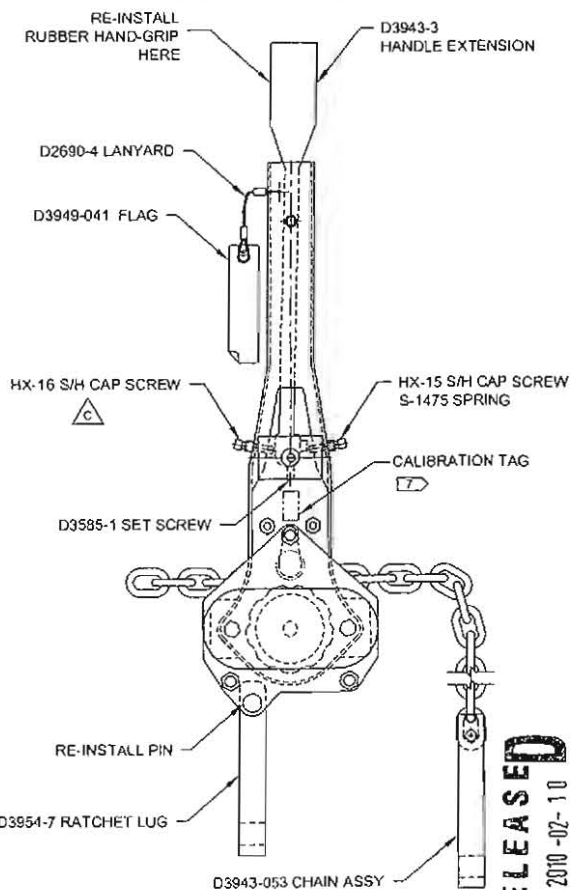
REMOVE AND RETAIN  
RUBBER HAND GRIP



8143919 LEVER CHAIN HOIST  
(SHOWN PRIOR TO MODIFICATION)  
(CHAIN SHOWN SHORTENED FOR CLARITY)



(CHAIN NOT SHOWN FOR CLARITY)



(CHAIN SHOWN SHORTENED FOR CLARITY)

# D3943-041 GROUND HANDLING CRANK ASSEMBLY

## NOTES -041:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART OSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3943-041" USING FINE POINT PERMANENT INK MARKER
- 7) CALIBRATION TAG PER DART OSI 008 4 4 (ZN C1-2)

W10: 63727

DESIGN	DSTOW / AJS	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. C
MFG. APPR.	AP	D3943	SHEET 2 OF 5
APPROVED	AP	TITLE	SCALE
DE APPR.	N/A	GROSS WEIGHT TOW CRANK ASSY	NTB
DATE	10.01.26	COPYRIGHT © 2009 BY DART AEROSPACE LTD	

RELEASED  
2010-02-10

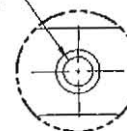
D3943-1 HANDLE

2 PL

9.75

2.00

0.41

Ø0.31  
THRUØ0.12  
THRUD3943-7 STUD  
2 PLTHREAD 1/2-20 UNC-2B  
2 PLTHREAD 1/2-20 UNC-2B  
THRUVIEW A-A  
(SCALE 2X)

2 PL

9.37

A B1-3

A B1-3

D3943-5 PLATE

## D3943-051 HANDLE ASSEMBLY

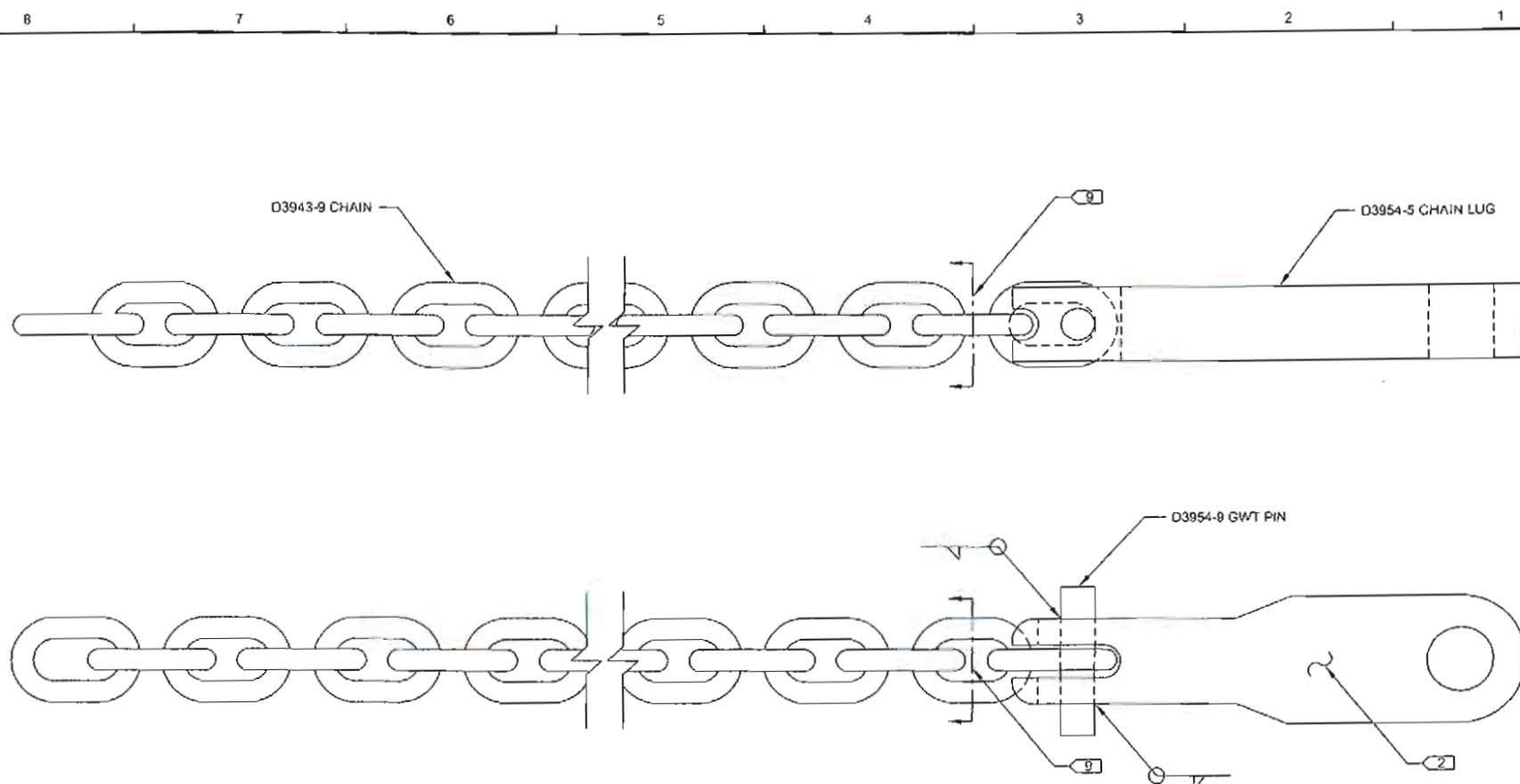
## NOTES -051:

- 1) MATERIAL, N/A
- 2) FINISH, POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART OSI 005.4.3
- 3) TOLERANCES, X.XX DIMENSIONS  $\pm 0.06$  ALL OTHERS  
PER DART OSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS, INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES, N/A
- 6) IDENTIFICATION, NONE
- 7) MASK ALL THREADS PRIOR TO POWDER COATING

W10:63727

RELEASED  
2010-02-10  
MHP

DESIGN	DSTOW / AJS	DART AEROSPACE LTD	
DRAWN	97	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG APPR		D3943	SHEET 3 OF 6
APPROVED		TITLE	SCALE
DE APPR	N/A	GROSS WEIGHT TOW CRANK ASSY	NTS
DATE	10.01.26	COPYRIGHT © 2009 BY DART AEROSPACE LTD	



D3943-053 CHAIN ASSEMBLY

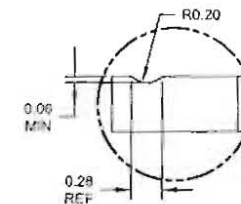
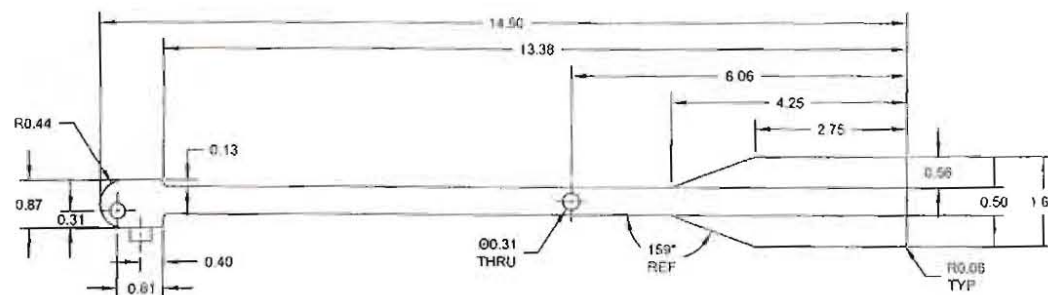
W101.63727

**RELEASED**  
2010-02-10  
WHD

**NOTES -053:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4 3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER QSI 004
- 9) MASK CHAIN FROM THIS POINT ON PRIOR TO POWDER COATING

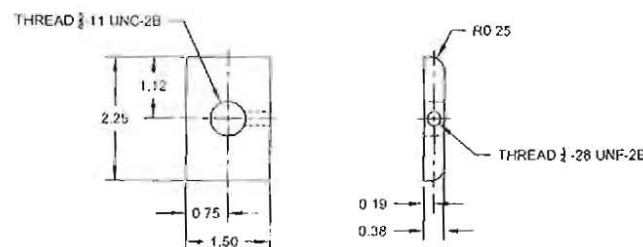
DESIGN	DSTOW/AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	JP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JP	DRAWING NO.	REV. C
MFG. APPR.	JP	D3943	SHEET 4 OF 5
APPROVED	WHD	TITLE	SCALE
DE APPR.	N/A	GROSS WEIGHT TOW CRANK ASSY	NTS
DATE	10.01.26	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PREPARED AND CONTAINS ALL INFORMATION AND IS NOT TO BE USED FOR ANY PURPOSES WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	



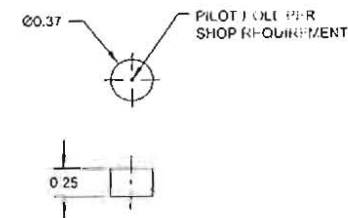
DETAIL B-B C7.5  
(SIMPLE DETAIL)  
(SCALE 2X)



D3943-3 HANDLE EXTENSION



D3943-5 PLATE



D3943-7 STUD  
(SCALE 2X)

NOTES -11/13:

1) MATERIAL -3 & -5: MILD STEEL, SHEET

AISI 1010-1025 OR ASTM A36/A360/A1008  
OR CSA G40-21, 38W/44W/50W/60W/70W  
REF DART SPEC M1010-S

OR MILD STEEL, BAR

AISI 1010-1025 OR ASTM A36/A360/A569/A570  
OR CSA G40-21, 38W/44W/50W/60W/70W  
REF DART SPEC M1010-B

-7: MILD STEEL, ROUND BAR

AISI 1018-1025  
PER MIL-S-7087  
REF DART SPEC M1018-R

- 2) FINISH -3: POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3  
-5 & -7: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE

w101.63727

RELEASED  
2010-02-10

DESIGN	DSTOW / AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	97	DRAWING NO.	REV. C
CHECKED		D3943	SHEET 5 OF 5
MFG. APPR.		TITLE	SCALE
APPROVED		GROSS WEIGHT TOW CRANK ASSY	NTS
DE APPR.		COPYRIGHT © 2009 BY DART AEROSPACE LTD	
DATE	10.01.26	THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED ONLY FOR THE PURPOSES SPECIFIED IN THE DRAWING. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

Purchase Order ID PO12903

Purchase Order Date 11/11/10  
PO Print Date 11/11/10

Page Number 1 of 1

Order From :

VC-PR1001

PRINCESS AUTO LTD.  
P.O. BOX 1005  
WINNIPEG, MB R3C 2W7  
CA

*REVISED  
QTY*

Contact Name

Vendor Phone

Vendor Fax

Vendor Account Nbr

613 247 1651

613 247 1657

Buyer

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

*CLC/4/11*

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	8143919	Lever Chain Hoist	11/16/10 Yes	5.00 Each	Purolator ground	\$159 9900	\$799 95

Special Instr: AS PER DWG D3943 REV C  
B63727  
PRINCESS AUTO P/N 8143919

PO Total:

\$799.95

*CLC/4/11*

PO Instructions: PLEASE SHIP PUROLATOR ACCT 7684382

Change Nbr: 2

Change Date: 11/11/10

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

# Princess Auto Ltd.

Ottawa  
1111 Ages Drive  
Ottawa, ON K1G6L3

Date 1/11/2010 Time 5 09 pm

~~CONFIDENTIAL~~

8 11966 6615 1454862 16  
Team Mbr Till 6096  
SOLD TO: TEAM MEMBER:  
073126 JIM A 6615  
DART AEROSPACE

PO #P012903

~~CONFIDENTIAL~~

8 8143919 5 159 99 799.95

HOTST CHAIN 2 TON LEVER

6 9999998 1 6.00 6.00

HANDLING FEE

\*Send To:

DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A1K7  
(613) 632-5200

PO # 12903

Subtotal	805.95
GST 5%	13568217 0.30
HST 13%	R104304738 103.99
PST 0.0%	0.00
Total	910.24

A/R Account (910.24)  
073126

Item Count: 5

## CUSTOMER COPY

Electric, propane and kerosene heaters are  
here to keep you working right through  
winter



00016145486210321

8  
10/11/22

REFERENCE ONLY

## INTERNAL CALIBRATION CERTIFICATE

Instrument #	Description	Serial #
D3943-041	Ground Handling Crank Assembly	B63727-2

Calibrated by	Date of calibration	Calibrated with	Due	Certificate #
ED	April 19th, 2011	ENG 07 25000lbs load cell		

New tool	Disposed	In Repair	On Hold	Being Calibrated
N/A	N/A	N/A	N/A	N/A

Employee	Department	Comments:
N/A	N/A	MUST BE CALIBRATED WITHIN 1 YEAR OF PURCHASE OR FIRST OPERATION

Spec.	Tolerance is +/-	Result	Pass Fail
3500lbs	3500-3700lbs	3680lbs	PASS

Entered By:  
Eric Downing QC Coordinator



REFERENCE ONLY